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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,005	06/09/2006	Pierre Jean Messier	TRI-018-NP	9022
24964 7590 12/09/2009 GOODWIN PROCTER LLP ATTN: PATENT ADMINISTRATOR 620 Eighth Avenue NEW YORK, NY 10018				
EXAMINER STEELE, JENNIFER A				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
12/09/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/528,005

Applicant(s)

MESSIER, PIERRE JEAN

Examiner

JENNIFER STEELE

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 25-40 is/are pending in the application.
- 4a) Of the above claim(s) 33-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 25-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date 9/28/2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/28/2009 has been entered.

Affidavit/Declaration

2. The Declaration under 37 CFR 1.132 filed 9/28/2009 is insufficient to overcome the rejection of claim 1-6 and 25-32 based upon Messier in view of Pike as set forth in the last Office action because:

a. The evidence is not commensurate with the scope of the claims. The evidence clearly shows that the embodiment tested against an electrostatically charged web has superior properties for capturing and killing bacteria and viruses, however the embodiment tested represents a structure of two electrostatically charged meltblown webs sandwiching an electrostatically charged meltblown web that comprises the iodinated resin.

i. Claim 1 describes a porous dielectric carrier with an active agent, said active agent being an iodinated resin. A porous dielectric carrier is not limited to a meltblown fibrous web and claim 1 does not teach a

sandwich type structure of dielectric webs sandwiching a dielectric web with iodinated resin.

ii. Claim 4 describes the porous dielectric carrier is an open cell matrix structure is a foam. The embodiments described in the declaration do not encompass this structure.

iii. Claim 25 describes two porous dielectric carriers incorporated with iodinated resin. Claim 25 does not describe the embodiment described in the Declaration.

iv. Claim 30 describes a porous dielectric carrier that is a sponge like material having an open cell matrix.

An amendment to the claims to be commensurate in scope with the evidence would be sufficient to overcome the rejection over Messier in view of Pike.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claim 1-3, 5-6, 25-29, and 31-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Messier (US 6,224,655) in view of Pike et al (US 5,873,968).

Messier teaches a biostatic air filter that is a microbiocidal air filter element comprised of an air permeable nonwoven fibrous carrier to which the iodinated strong base anion exchange resin is held within. Messier teaches the anion exchange resin can be in the form of particles dispersed in the fibrous matrix of the filter element. Messier differs from the current application and does not teach that the filter is a dielectric carrier and has an electrostatic charge.

Pike teaches a laminate filter medium having an electret lofty spunbond web and an electret microfiber web. Pike teaches filter media is porous and teaches large interfiber pores have high permeability and fine interpore structures of meltblown webs tend that are better at trapping fine particles tend to have lower permeability (col. 1, lines 11-38). Pike teaches a fibrous nonwoven web comprising the lofty layer and the microfiber layer are electretized by methods such as thermal, plasma-contact, electron beam and corona discharge. The dielectric carrier is equated with the electrically charged and electret treated web of Pike.

Pike presents a finding that one of ordinary skill in the art could have substituted the electrostatically charge filter in the biostatic filter of Messier and the results of the combination would have been predictable.

Regarding claim 2, 3, 28 and 29, Messier does not teach a dielectric carrier. Pike teaches the electrically charged web is a nonwoven and Pike teaches the nonwoven web is a fibrous structure. A fibrous nonwoven web structure would be a fibrous matrix structure.

With respect to claim 30, Messier teaches the biostatic filter can be comprised of an intermediate filter with iodinated resin either as a membrane or incorporated as particulate in the carrier matrix structure. Messier teaches that the layers of filter can be spaced apart and in a zig-zag folded where the organisms become entrapped between the intermediate air filter and the upstream and downstream filter elements. As a nonwoven batt is sponge like and there are spaces between the filter components there would be an open cell matrix structure present.

Regarding claim 5 and 31, Messier teaches a zig-zag structure which would be three-dimensional. Messier teaches the iodinated resin can be in particulate form and can be between layers or coated particulates on membranes.

As to claim 6 and 32, Messier teaches the iodinated resin particles are dispersed in the carrier matrix of the air filter element (col. 2, lines 20-21).

With regards to claim 25, Messier teaches layers of air filter materials. Pike teaches two layers of nonwoven materials and Pike teaches both layers are electretized. Pike presents a finding that one of ordinary skill in the art could have substituted the electrostatically charge filter with two layers in the biostatic filter with multiple layer of Messier and the results of the combination would have been predictable.

Regarding claim 26, Messier teaches an iodinated exchange resin can be present on a first and second membrane.

As to claim 27 and 28, Messier teaches an air gap separates the filter elements of the intermediate filter and the iodinated resin membranes. Pike teaches nonwoven webs that can be made electrostatically charged. It would have been obvious to substitute the nonwoven fibrous filters of Messier with nonwoven webs of Pike that are dielectric carriers motivated to improve the filtration efficiency.

2. Claim 4 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Messier (US 6,224,655) in view of Pike et al (US 5,873,968) and in further view of Messier (US 5,639,452). Messier in view of Pike does not teach a sponge like structure that is a foam. Messier '452 teaches a iodine resin disinfectant wherein the iodine is impregnated into a resin (ABST). Messier '452 teaches the invention is useful for protective clothing and disinfectant dressings and cartridge filters (col. 35, lines 20-35). Messier '452 teaches a disinfectant component comprising particles of an iodinated anion exchange resin and a carrier component being configured to hold onto the iodine particles (col. 6, lines 45-54). Messier '452 teaches the carrier is a foam having a spongy aspect and having dispersed within the polymeric matrix particles of the iodinated resin.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the iodinated resin particles into a foam structure motivated by Messier '452 foam structure used for protective clothing or media.

Response to Arguments

3. Applicant's arguments filed 9/28/2009 have been fully considered but they are not persuasive. The Rule 1.132 Declaration clearly shows that the combination of two electrostatically charged meltblown web sandwiching an electrostatically charged meltblown web which incorporates an iodinated resin has superior antimicrobial and antiviral properties. The evidence is not commensurate with the scope of the claims and the previous 35 USC 103 rejection is maintained. The Declaration and evidence shows that the sandwich structure provides an electrostatically charged web that attracts the virus and the iodinated resin kills a greater percentage of the virus. Previous electret webs were able to attract the virus but not kill the virus therefore allowing for some virus particles to eventually pass through the filter.

If the claims are amended to be commensurate in scope with the evidence, the rejection over Messier in view of Pike will be withdrawn and the claims in condition for allowance.

4. Another reference that is related to the claimed invention is JP-08-284063 which claims an electrostatically charged meltblown polypropylene web that has a chlorinated resin sprayed onto the web. A chlorinated resin would be antimicrobial. As the Declaration states that previous attempts to combine antimicrobial compounds with electret webs diminishes the antimicrobial efficacy of the active agent (item 4 of the Declaration), the Declaration overcomes this reference. Applicant's Declaration is

stating and showing evidence that the results of substituting the iodinated resin for another antimicrobial are unexpected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER STEELE whose telephone number is (571)272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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